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### **DETAILED ACTION**

Applicant's request for reconsideration of the non-finality of the rejection of the last Office action is persuasive and, therefore, the non-finality of that action is withdrawn.

The arguments submitted on 10/07/2011 have been entered to the record.

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Raymond Y. Mah on 10/31/2011.

Please amend the claims as follows:

1.-2. (Canceled)

3. (Currently Amended) A method of transmitting data over a decentralised network, the method comprising:



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receiving a plurality of data files at a relay device, each of the data files having a respective predetermined expiry time, and at least one of the data files being a compressed data file,

processing the data in the received plurality of data files by aggregating those of the received data files having a common predetermined expiry time to create a plurality of aggregated compressed data files, and

broadcasting each aggregated compressed data file to a plurality of similar relay devices over the decentralised network,

wherein the compression and aggregation technique applied to the data is a Bloom filter process, and

wherein each individual aggregated compressed data file has a predetermined expiry time which is equal to the common predetermined expiry time of the received data files included in that individual aggregated compressed data file, and wherein are forwarded only those aggregated compressed data files for which the respective predetermined expiry times have not been exceeded, and wherein the aggregated compressed data files are broadcasted using an epidemic dissemination process.

4. (Previously Presented) The method according to claim 3, wherein data files received by a relay device having the same expiry time are aggregated into a single data file for further dissemination.

5. (Canceled)



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6. (Previously Presented) The method according to claim 3, wherein each relay device stores each data file received, compares subsequently received data files with those already stored, and suspends the aggregating and forwarding process for any duplicate data files identified.

7. (Currently Amended) The method according to claim 3, wherein at least some of the relay devices receive compressed data from an associated data generation and compression unit.

8.-9. (Canceled)

10. (Currently Amended) A relay device comprising:  
a receiver for receiving a plurality of data files, each of the data files having a respective predetermined expiry time, and at least one of the data files being a compressed data file,  
an aggregation processor for processing the data in the received plurality of data files by aggregating those of the received data files having a common predetermined expiry time to create a plurality of aggregated compressed data files, and  
a transmitter for selecting a plurality of similar relay devices and broadcasting each aggregated data file to the selected relay devices over a decentralized network,  
a unit configured to determine a predetermined expiry time for each aggregated compressed data file, the predetermined expiry time for said each aggregated compressed data file being equal to the common predetermined expiry time of the received plurality of data files



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included in that aggregated compressed data file, and selecting for transmission only those aggregated data files for which the respective predetermined expiry times have not been exceeded;

wherein the relay device has a configuration to handle the data in the form of Bloom filters; and

wherein the transmitter operates according to an epidemic dissemination process.

11. (Previously Presented) The relay device according to claim 10, wherein the aggregation processor is arranged to aggregate data files having the same expiry time aggregated into a single data file for further transmission.

12. (Currently Amended) The relay device according to claim 11 having a unit configured to disseminate a plurality of such aggregate data files having different expiry times.

13. (Canceled)

14. (Currently Amended) The relay device according to claim 10, comprising data storage memory configured to store each data file received, and a processing unit configured to compare each stored data file with those subsequently received, and wherein the transmitter is arranged to only broadcast those received data files that are not duplicated in the data storage memory.



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15. (Currently Amended) The relay device according to claim 10, further having a receiver configured to receive further data from a data generator, and a data compression unit configured to compress the data for transmission in an aggregated data file.

16. (Currently Amended) The relay device according to claim 10, having an analysis unit configured to analyze incoming aggregate data files to capture data contained therein.

17. (Currently Amended) A decentralised communications network comprising:  
a plurality of servers configured to collectively maintain a database that records event reports, the plurality of servers forming an overlay network and intercommunicating using a common messaging strategy based on a publisher forwarding scheme running over the overlay network,

the servers being configured to aggregate compressed data messages having a common predetermined expiry time and being received from one or more other servers to create one or more compressed Bloom filter aggregate data files, and to broadcast the compressed aggregate data file to one or more of the other servers,

at least one of the servers being configured to generate data files in response to specific events, and to aggregate the data files so generated with the data files received from the other servers,

the servers being configured to modify the aggregate data files the servers receive before broadcasting them,



wherein each individual aggregate Bloom filter data file has a predetermined expiry time which is equal to the common predetermined expiry time of the aggregate compressed data messages included in that Bloom filter data file, the servers being configured to forward, using an epidemic dissemination process, only the Bloom filter data files for which the respective predetermined expiry times have not been exceeded.

18. - 20. (Canceled)

21. (Currently Amended) The decentralised communications network according to claim 17, wherein individual servers have a unit configured to delete from the data that is to be forwarded any data that has been previously received and forwarded by the same device.

22. (Currently Amended) The decentralised communications network according to claim 17, wherein individual servers have a unit configured to extract data required by a processing device associated with the server.

23. (Previously Presented) The method according to claim 3, wherein the data that is received at the relay device from different sources at a same time frame is aggregated by the Bloom filter process so that in each said time frame only a single Bloom filter data file is broadcasted by the relay device.



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24. (Previously Presented) The relay device according to claim 10, wherein the data that is received by the receiver of the relay device from different sources at a same time frame is aggregated by the Bloom filters so that in each said time frame only a single Bloom filter data file is broadcasted by the transmitter of the relay device.

25. (Previously Presented) The decentralised communications network according to claim 17, wherein the data files that are received by at least one of the servers from different sources at a same time frame are aggregated by a Bloom filter process so that in each said time frame only a single Bloom filter data file is broadcasted by the at least one of the servers.

26. (Previously Presented) The method according to claim 3, wherein said broadcasting is performed without a specified destination.

27. (Previously Presented) The relay device according to claim 10, wherein said broadcasting is performed without a specified destination.

28. (Previously Presented) The decentralised communications network according to claim 17, wherein said broadcasting is performed without a specified destination.

### ***Response to Arguments***



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1. Applicant's arguments, please see pages 9-14, filed on 10/07/2011, with respect to claims 3-7, 10-17, and 21-25 have been fully considered and, in light of the claims amendments applicant has agreed to, are persuasive. The rejections of claims 3-7, 10-17, and 21-25 have been withdrawn.

***Allowable Subject Matter***

2. **Claims 3-4, 6-7, 10-12, 14-17 and 21-28** are allowed.

3. The following is an examiner's statement of reasons for allowance:

4. **Claims 3-4, 6-7, 10-12, 14-17 and 21-28** are allowable over prior arts since none of the prior art reference(s) taken individually or in combination fails to particularly disclose, fairly suggests, or render obvious as argued by the applicant which examiner considers as persuasive as set forth above.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***



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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET TANG whose telephone number is (571)270-7193.

The examiner can normally be reached on Monday-Friday 8:00AM-5:00PM.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, IAN MOORE can be reached on (571) 272-3085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. T./  
Examiner, Art Unit 2469

/IAN N. MOORE/

Supervisory Patent Examiner, Art Unit 2469